IN THE CLAIMS

This is a complete and current listing of the claims, marked with status identifiers in parentheses. The following listing of claims will replace all prior versions and listings of claims in the application.

1. (Original) A method of growing a semiconductor layer structure, the method comprising the steps of:

growing a first (Al,Ga)N layer over a substrate at the first substrate temperature by MBE using ammonia as the nitrogen precursor;

cooling the substrate to a second substrate temperature lower than the first substrate temperature, while maintaining the supply of ammonia to the substrate;

growing an (In,Ga)N quantum well structure over the first (Al,Ga)N layer by MBE using ammonia as the nitrogen precursor;

heating the substrate to a third substrate temperature higher than the second substrate temperature, while maintaining the supply of ammonia to the substrate; and

growing a second (Al,Ga)N layer over the quantum well structure at the third substrate temperature by MBE using ammonia as the nitrogen precursor.

2. (Original) A method as claimed in claim 1 wherein the first (Al,Ga)N layer has a first conductivity type.

3. (Original) A method as claimed in claim 2 wherein the second (Al,Ga)N layer has a second conductivity type different from the first conductivity type.

4. (Original) A method as claimed in claim 3 wherein the first (Al,Ga)N layer is doped n-type and the second (Al,Ga)N layer is doped p-type.

5. (Currently Amended) A method as claimed in ~~any preceding claim~~ claim 1 wherein the first substrate temperature is within the range 850°C to 1050°C.

6. (Currently Amended) A method as claimed in ~~any preceding claim~~ claim 1 wherein the second substrate temperature is within the range 650°C to 1000°C.

7. (Currently Amended) A method as claimed in ~~any preceding claim~~ claim 1 wherein the third substrate temperature is within the range 850°C to 1050°C.

8. (Currently Amended) A semiconductor layer structure grown by a method as defined in ~~any of claims 1 to 7~~ claim 1.

9. (Currently Amended) A semiconductor light-emitting device

comprising a semiconductor layer structure grown by a method as defined in ~~any of claims 1 to 7~~ claim 1.

10. (Original) A semiconductor device as claimed in claim 9 wherein the device is a light-emitting diode.